

**Cultural heritage impact assessment report for the  
PROPOSED ESKOM INTABAZWE DISTRIBUTION SUBSTATION AND  
ASSOCIATED LOOP-IN, LOOP-OUT POWER LINES,  
HARRISMITH REGION, FREE STATE PROVINCE**

**CULTURAL HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED  
ESKOM INTABAZWE DISTRIBUTION SUBSTATION AND ASSOCIATED LOOP-  
IN, LOOP-OUT POWER LINES, HARRISMITH REGION, FREE STATE PROVINCE**

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**Declaration:**

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



J A van Schalkwyk (D Litt et Phil)  
Heritage Consultant  
November 2013

## **EXECUTIVE SUMMARY**

### **CULTURAL HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED ESKOM INTABAZWE DISTRIBUTION SUBSTATION AND ASSOCIATED LOOP-IN, LOOP-OUT POWER LINES, HARRISMITH REGION, FREE STATE PROVINCE**

Jaffares & Green (Pty) Ltd was appointed by Eskom to conduct an environmental impact assessment for the construction of the new Intabazwe 132/11kV substation, loop-in/loop-out lines and associated infrastructure development in Harrismith, Free State Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by Jeffares & Green (Pty) Ltd to conduct a Cultural Heritage Impact Assessment (HIA) to determine if the proposed development of the substation and loop-in, loop-out lines would have an impact on any sites, features or objects of cultural heritage significance.

The cultural landscape qualities of the region surrounding the study area consists two components. The first is an extensive Stone Age occupation, which in most cases clustered in the vicinity of the various water sources as well as preferred habitable areas such as hills and outcrops. This period, spanning many thousands of years, was followed by a much shorter farming and urban occupation.

- A number of stone walled settlement sites dating to the Late Iron Age have been identified on a ridge near the middle of the power line routes. They can be associated with the Sotho-speakers and date from the period AD 1600 onwards. As little is known about Late Iron Age settlement in this region and the sites are still well-preserved, they are viewed to have the following significance:
  - High on a regional level – Grade III
  - As very little is known about Late Iron Age sites in this region, it is recommended that the sites are retained and that it is fenced off with danger tape during construction. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- Various features dating to the historic period have been identified in the larger study area. These vary from farming related structures (old stock pens, etc.) to homesteads formerly occupied by farm labourers. These sites would not differ from similar sites in contiguous areas or from the larger region and are therefore viewed to have the following significance:
  - Low on a local level – Grade III
  - It is recommended that these sites are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most edge of the visible structures for the duration of the construction of the power lines. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- A number of informal burial places were identified. These range in size from single graves to cemeteries containing as many as 30 graves. In most cases the graves are only marked with stone cairns and have no headstones with any information on it. Burial sites

are usually significant to descendants of people buried there, unless the site can be linked to a historic significant individual or group of individuals, or a specific event. As this is not the case here, they are viewed to have the following significance:

- High on a local level – Grade III
- It is recommended that these burials are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most graves for the duration of the construction of the power lines. If any of these burial sites cannot be avoided, it is recommended that graves are relocated after the proper procedure has been followed – see Appendix 3.

Therefore, from a heritage point of view we recommend that the proposed development can continue on condition of acceptance of the recommended mitigation measures. We also recommend that if archaeological sites or graves are exposed during development activities, it should immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk  
Heritage Consultant  
November 2013

**TECHNICAL SUMMARY**

<b>Property details</b>	
Province	Free State
Magisterial district	Harrismith
District municipality	Thabo Mofutsanyane
Topo-cadastral map	2829AA, 2829AC
Closest town	Harrismith
Farm name & no.	Dorpsgronden van Harrismith, Roomvlei 444
Portions/Holdings	-

<b>Development criteria in terms of Section 38(1) of the NHR Act</b>	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
Construction of bridge or similar structure exceeding 50m in length	
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	
Development involving three or more erven or divisions that have been consolidated within past five years	
Rezoning of site exceeding 10 000 sq m	
Any other development category, public open space, squares, parks, recreation grounds	

<b>Development</b>	
Description	Construction of a substation and associated loop-in, loop-out lines
Project name	Ntabazwe Distribution Substation

<b>Land use</b>	
Previous land use	Agriculture (grazing)
Current land use	Agriculture (grazing)

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## **GLOSSARY OF TERMS AND ABBREVIATIONS**

### **TERMS**

**Study area:** Refers to the entire study area as indicated by the client in the accompanying Fig. 1 - 2.

**Stone Age:** The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 000 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Later Stone Age	30 000 - until c. AD 200

**Iron Age:** Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. As they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Late Iron Age	AD 1300 - AD 1830

**Historical Period:** Since the arrival of the white settlers - c. AD 1840 - in this part of the country.

### **ABBREVIATIONS**

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

# **CULTURAL HERITAGE IMPACT ASSESSMENT REPORT FOR THE PROPOSED ESKOM INTABAZWE DISTRIBUTION SUBSTATION AND ASSOCIATED LOOP-IN, LOOP-OUT POWER LINES, HARRISMITH REGION, FREE STATE PROVINCE**

## **1. INTRODUCTION**

Jaffares & Green (Pty) Ltd was appointed by Eskom to conduct an environmental impact assessment for the construction of the new Intabazwe 132/11kV substation, loop-in/loop-out lines and associated infrastructure development in Harrismith, Free State Province.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, according to Section 27(18) of the National Heritage Resources Act (NHRA), No. 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by Jeffares & Green (Pty) Ltd to conduct a Cultural Heritage Impact Assessment (HIA) to determine if the proposed development of the substation and loop-in, loop-out lines would have an impact on any sites, features or objects of cultural heritage significance.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and is intended for submission to the South African Heritage Resources Agency (SAHRA).

## **2. TERMS OF REFERENCE**

This report does not deal with development projects outside of or even adjacent to the study area as is presented in Section 5 of this report. The same holds true for heritage sites, except in a generalised sense where it is used to create an overview of the heritage potential in the larger region.

### **2.1 Scope of work**

The aim of this HIA, broadly speaking, is to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the substation and loop-in, loop-out lines.

This include:

- Conducting a desk-top investigation of the area;
- A field survey of the proposed development site,

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development areas;



- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

## 2.2 Limitations

The investigation has been influenced by the following factors:

- The unpredictability of archaeological remains occurring below the surface.
- This report does not deal with the paleontological heritage of the region.

## 2.3 Assumptions

- It is assumed that the Social Impact Assessment and Public Participation Process might also result in the identification of sites, features and objects, including sites of intangible heritage potential on the site and that these then will also have to be considered in the management plan.
- It is assumed that a Visual Impact Assessment will be done to determine the impact of the power line on any identified heritage sites.

## 3. HERITAGE RESOURCES

### 3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
  - ancestral graves;
  - royal graves and graves of traditional leaders;
  - graves of victims of conflict;
  - graves of individuals designated by the Minister by notice in the Gazette;
  - historical graves and cemeteries; and
  - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
  - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - objects to which oral traditions are attached or which are associated with living heritage;
  - ethnographic art and objects;
  - military objects;
  - objects of decorative or fine art;
  - objects of scientific or technological interest; and

- books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

### 3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

A matrix was developed whereby the above criteria were applied for the determination of the significance of each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar identified sites.

## 4. STUDY APPROACH AND METHODOLOGY

### 4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figure 1 - 3.

### 4.2 Methodology

#### 4.2.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various

anthropological, archaeological and historical sources were consulted – see list of reference in Section 8 below.

- Information on events, sites and features in the larger region were obtained from these sources and was used to compile a synopsis of the region which is presented in Section 5.3 of this report.

#### 4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General* and the *National Archives of South Africa* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.

#### 4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references in Section 8 below.

- Information of a very general nature were obtained from these sources

#### 4.2.2 Field survey

The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area that had to be investigated was identified by Jeffares & Green (Pty) Ltd by means of maps. The area was visited on 12 June 2013 and again on 7 December 2013 and investigated by walking various transects across it – see Fig. 1.

The track log and identified sites were recorded by means of a Garmin Oregon 550 handheld GPS device. Photographic recording was done by means of a Canon EOS 550D digital camera.

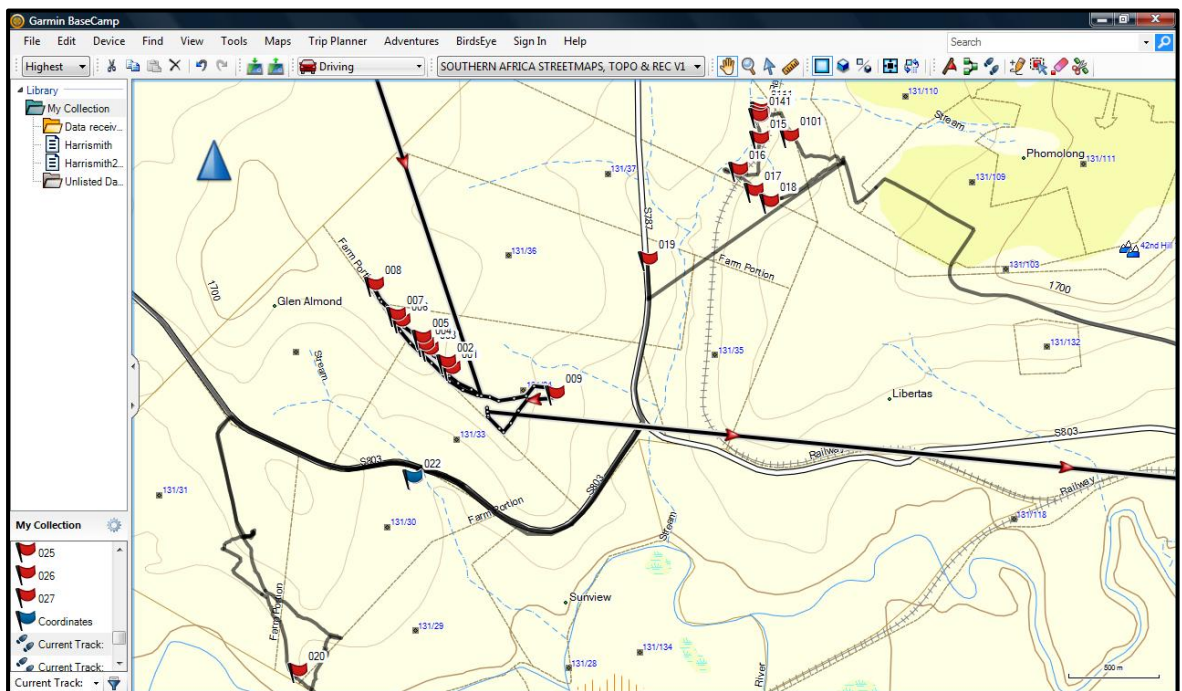


Fig. 1. Map indicating the track log of the field survey.

#### 4.2.3 Documentation

All sites, objects and structures that are identified are documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities are determined by means of the *Global Positioning System* (GPS) and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

Map datum used: Hartebeeshoek 94 (WGS84).

## 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

### 5.1 Site location

The substation is to be located on a small section of land on the farm Dorpsgronden van Harrismith 131 on the western outskirts of the town of Harrismith. The loop-in/loop-out line will cross the western section of this farm and end on the farm Roomvlei 444. For more information, please see the Technical Summary presented on p. iii above.

The geology is described as mudstone, with arenite found as harder outcrops between the various rivers and streams criss-crossing the region. The original vegetation is classified as Moist Cold Highveld Grassland. The topography of the region is very broken, with high mountains to the east, changing to a table land with isolated high hills in the west. The Wilge Rivier is located on the south-western boundary of the study area.

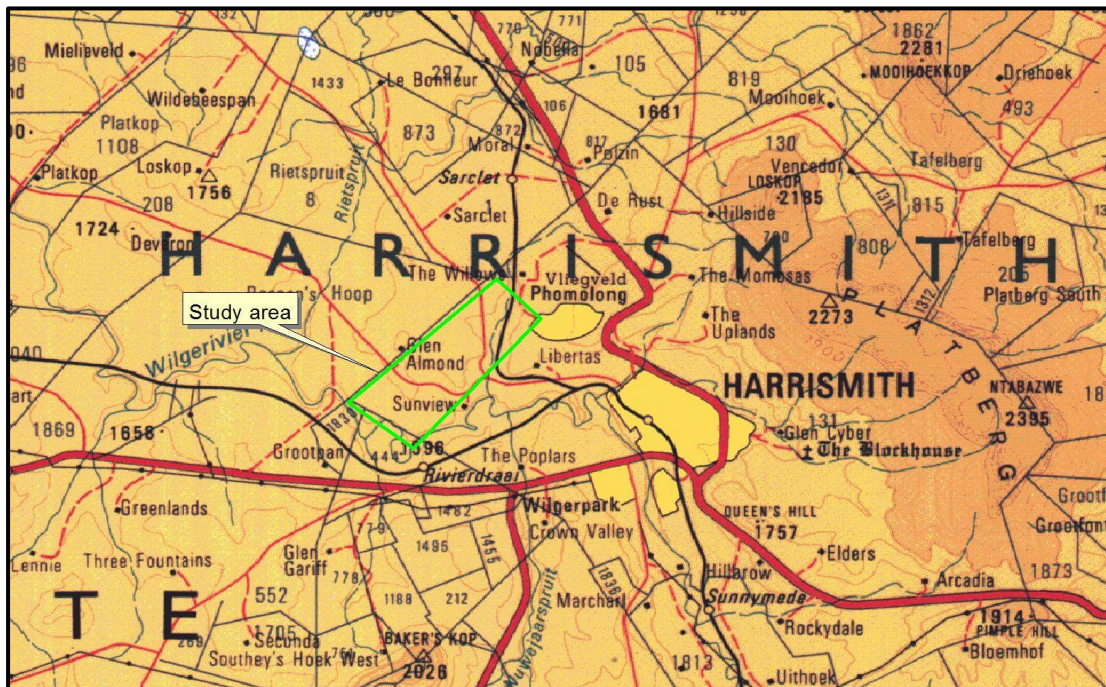


Fig. 2. Location of the study area (green outline) in regional context. (Map 2828: Chief Surveyor-General)



Fig. 3. Views over the study area.

## 5.2 Development proposal

Eskom Distribution Free State Operating Unit plans to build a new 132/11kV substation (to be named as Intabazwe from the township name where it will be located) on the outskirts of Harrismith in the eastern Free State. This includes the building of 2 x 4km lines:

- 132kV Loop-in line from Harrismith-Sorata line into the new substation
- 132kV Loop out line from the Harrismith- Sorata line

The identified site for the new-substation is at the following coordinates:

- S 28.24964, E 29.09192

In order to have some flexibility in siting the lines, the consultant was requested to survey an area approximately 1000 metres wide for each of the lines.

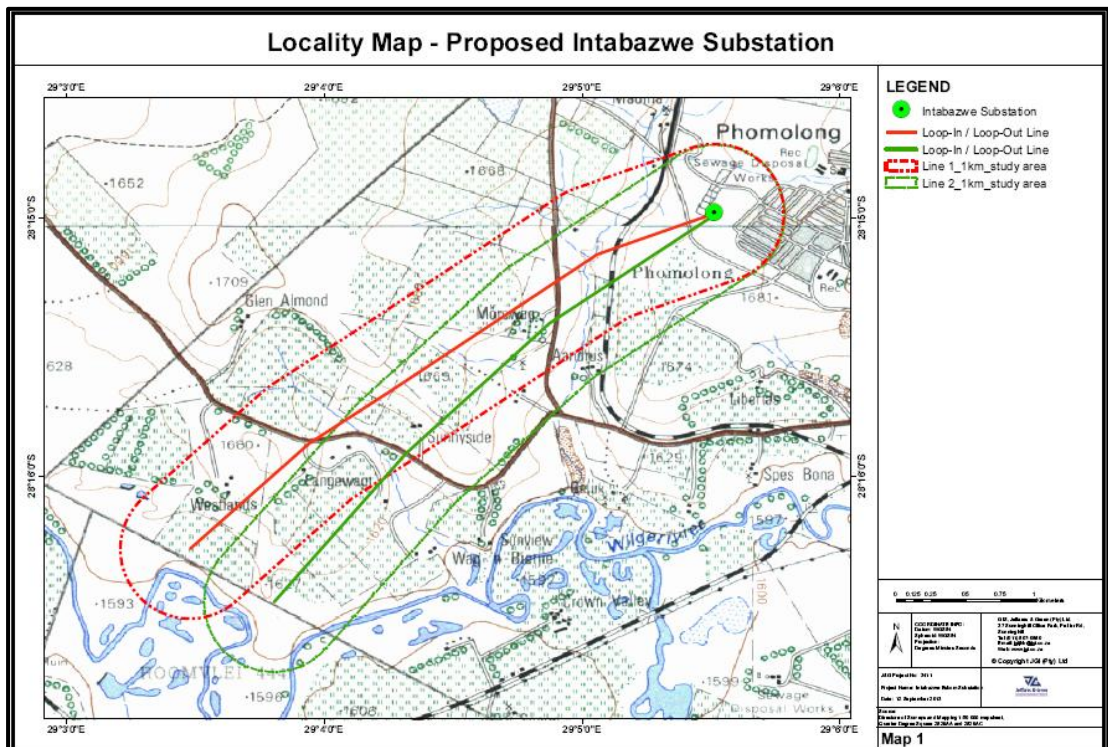


Fig. 4. Layout of the proposed development.  
(Map supplied by Jaffares & Green)

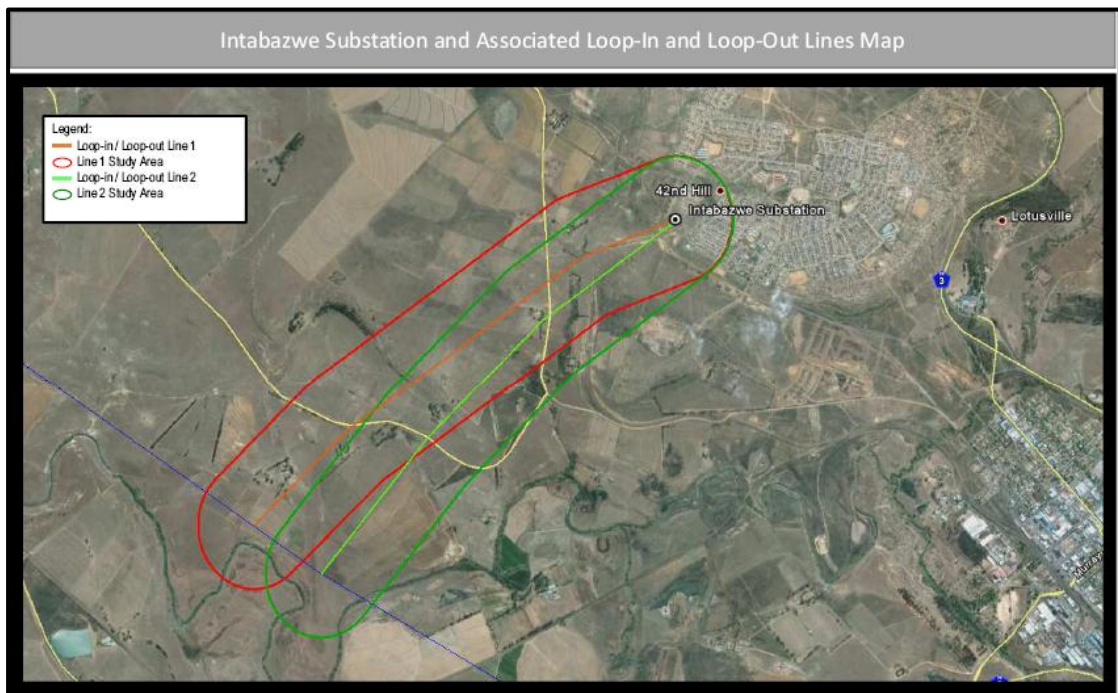


Fig. 5. Aerial view of the study area.  
(Photo: Google Earth)

### 5.3 Overview of the region

The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the study area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity – see Section 3.2 and Appendix 1 for more information.

The cultural landscape qualities of the region surrounding the study area consists two components. The first is an extensive Stone Age occupation, which in most cases clustered in the vicinity of the various water sources as well as preferred habitable areas such as hills and outcrops. This period, spanning many thousands of years, was followed by a much shorter Late Iron Age occupation and an even shorter farming component. Urban centres that evolved as part of this latter period of occupation, e.g. Harrismith, only came into being since the 1860s.

#### Stone Age

Little is known about the Stone Age in the region, especially with regard to the Middle Stone Age and even more so about the Early Stone Age. This is probably the result of environmental constraints, i.e. the region was too cold and it had little to offer in the sense of firewood and animals to hunt for food. Another reason is that people used to settle in open areas, located in the vicinity of water sources. Evidence of these settlements is therefore difficult to find.

During the Late Stone Age human population increased and, in a departure from previous periods, they preferred to occupy rock shelters which were occupied either on a cyclical manner or were re-occupied after a period of absence. During the Later Stone Age people also produced a rich legacy in rock art found in many of these shelters. This is evidenced by the number of rock shelters in the larger region in which rock paintings are found.

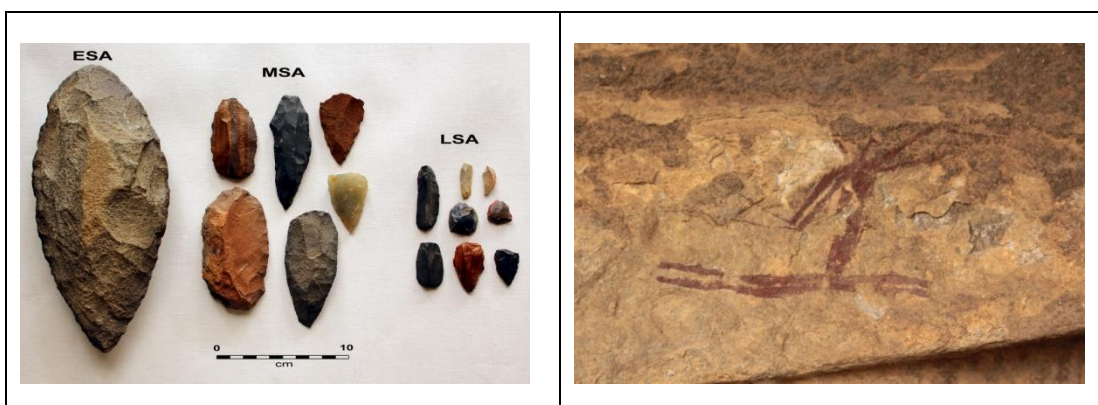


Fig. 6. Stone tool typology and rock paintings in the region.

*The stone tools (on the left) are not from the region and are only used to illustrate the difference between Early (left), Middle (middle) and Later Stone Age (right) technology.*

### *Iron Age*

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area. Because of their specific technology and economy, Iron Age people preferred to settle on the alluvial soils near rivers for agricultural purposes, but also for firewood and water.

This was also a period of great military tension. Military pressure from Zululand spilled onto the highveld by at least 1821. Various marauding groups of displaced Sotho-Tswana moved across the plateau in the 1820s. Mzilikazi raided the plateau extensively between 1825 and 1837. The Boers trekked into this area in the 1830s. And throughout this time settled communities of Tswana people also attacked each other. As a result of this troubled period, Sotho-Tswana people concentrated into large towns for defensive purposes. Because of the lack of trees they built their settlements in stone. These stone-walled villages were almost always located near cultivatable soil and a source of water.

The stone walled sites found in the larger region (Fig. 7) can probably be related to early Sotho-speakers that occupied the region from 1600 onwards (Maggs 1976). Their settlement layout differs substantially from that of the Koni (Nguni-speakers) located more to the north in Mpumalanga Province.



Fig. 7. Typical Late Iron Age stone walled site northeast of Harrismith.

### *Historic period*

White settlers moved into the area during the first half of the 19<sup>th</sup> century. They were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. Few towns were established and it remained an undeveloped area. During the Anglo-Boer War, the Vaal River played a significant role, as it formed a physical barrier that could be crossed only in a few places. Some skirmishes took place to the north of the study area, and most of the bridges were destroyed by the ZAR forces in an effort to keep the British at bay.

The town of Harrismith was originally laid out in 1849 at Majoorsdrif, approximately 16 km west of the current site. Due to a lack of water it was moved to its present location in 1850. It attained municipal status in 1875 (Raper 2004:131).





Fig. 8. Examples of heritage resources in the region, dating to the recent past.  
*Old bridge across the Wilge River; an abandoned farmstead; Harrismith city hall; a large community cemetery.*

#### 5.4 Identified sites

The following sites, features and objects of cultural significance were identified in the study area:

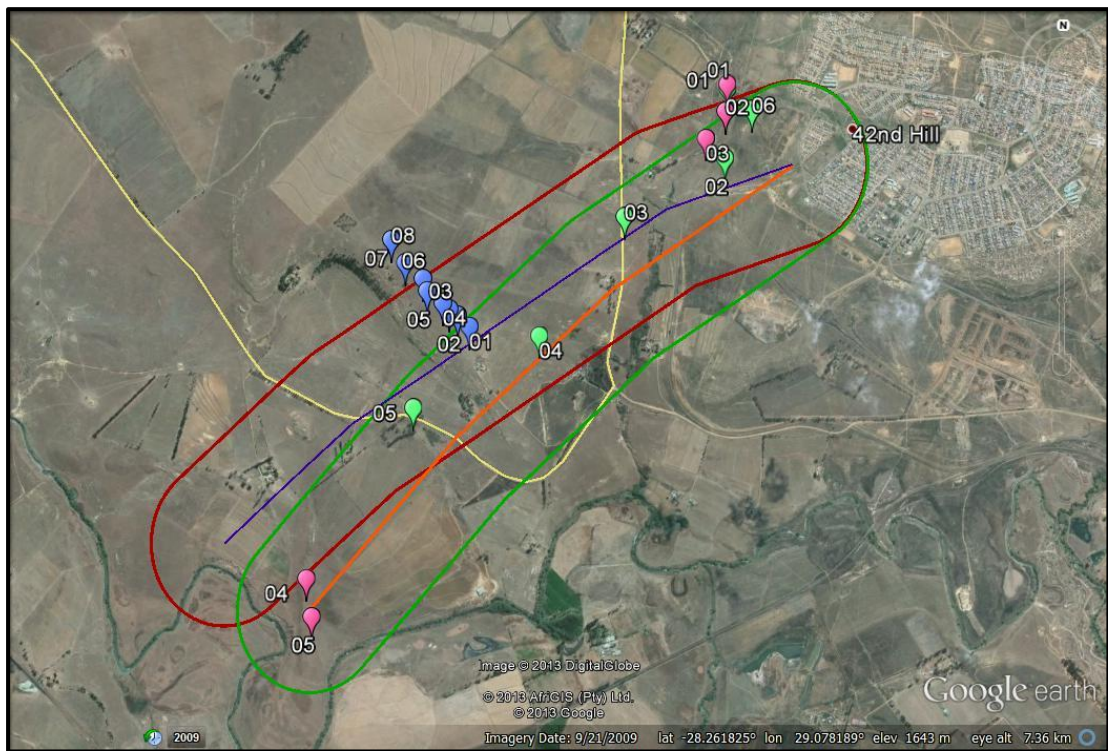


Fig. 9. Location of the identified heritage sites.  
 (Blue =Iron Age; Light red = isolated features; Green = burial places)

5.4.1 Stone Age

- No sites, features or objects dating to the Stone Age were identified in the study area

5.4.2 Iron Age

Location	No. 1 (Centre point)	S 28.25949	E 29.07135
	No. 2 (Centre point)	S 28.25916	E 29.07110
	No. 3 (Centre point)	S 28.25856	E 29.07019
	No. 4 (Centre point)	S 28.25833	E 29.06993
	No. 5 (Centre point)	S 28.25796	E 29.06979
	No. 6 (Centre point)	S 28.25716	E 29.06869
	No. 7 (Centre point)	S 28.25682	E 29.06843
	No. 8 (Centre point)	S 28.25536	E 29.06727
<b>Description</b>			
A number of stone walled settlement site dating to the Late Iron Age have been identified on a ridge near the middle of the power line routes. Unfortunately, due to the dense grass cover it was impossible to determine the exact layout and size of these sites. However, based on what was seen and what could be determined from aerial photographs they could be identified as what Maggs (1976) classify as “Type V” settlements, which according to him can be associated with the Sotho-speakers and date from the period AD 1600 onwards.			
The sites seems to be in a good condition and show little evidence of robbing of the stone walls (for building purposes) or any impact due to recent agricultural activities.			
<b>Significance</b>	High on a regional level – Grade III		
<b>Mitigation</b>			

The one corridor cover these sites and the proposed power line might cross over some of the identified structures. In addition, as the sites are located close to the edge of the ridge, it is possible that a tower might be located in or in close proximity of some of the stone walled sites.

**Recommendation:**

As very little is known about Late Iron Age sites in this region, it is recommended that the sites are retained and that it is fenced off with danger tape with a buffer of at least 10 metres from the outer most edge of the visible structures for the duration of the construction of the power lines. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.

**Requirements**

A permit should be obtained from SAHRA for the possible impact on the site prior to the development taking place.

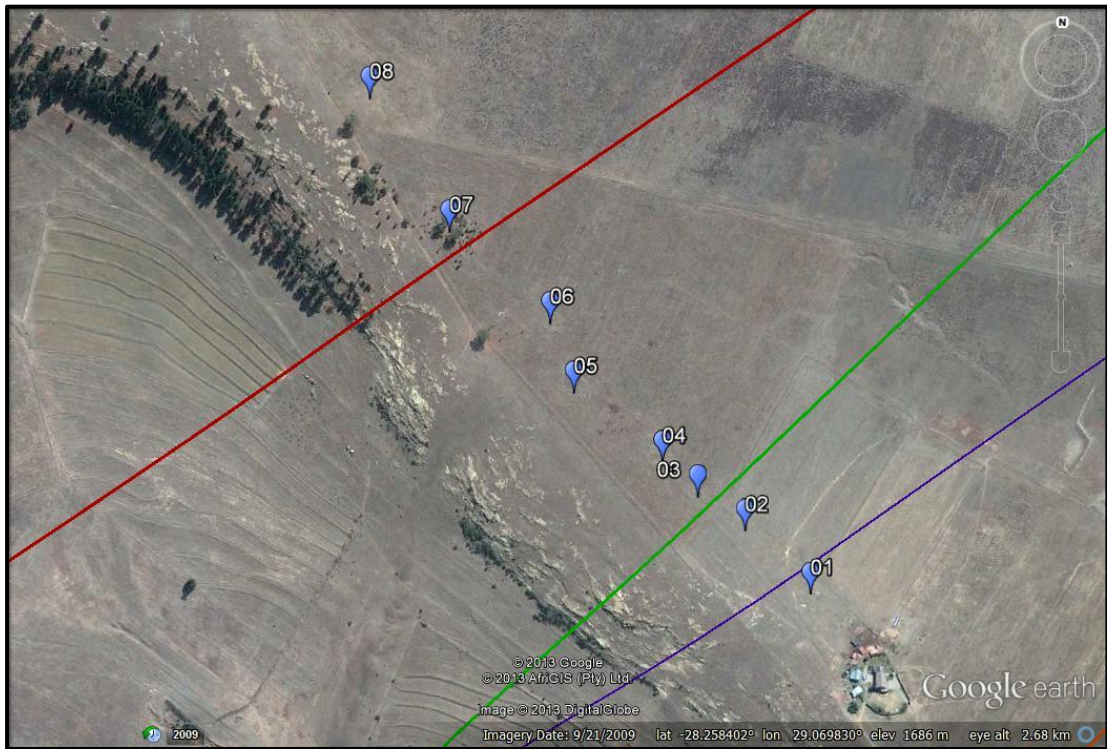


Fig. 10. Distribution of the Late Iron Age sites.





Fig. 11. Views of the identified Late Iron Age stone walled site.

#### 5.4.2 Historic period

<b>Location</b>	No. 1 (Centre point)	S 28.24671	E 29.08782
	No. 2 (Centre point)	S 28.24817	E 29.08778
	No. 3 (Centre point)	S 28.24968	E 29.08664
	No. 4 (Centre point)	S 28.27435	E 29.06318
	No. 5 (Centre point)	S 28.27642	E 29.06358
<b>Description</b>			
Various features dating to the historic period have been identified in the larger study area. These vary from farming related structures (old stock pens, etc.) to homesteads formerly occupied by farm labourers.			
<b>Significance</b>	Low on a local level – Grade III		
<b>Mitigation</b>			
These sites would not differ from similar sites in contiguous areas or from the larger region and are therefore seen to have a low significance. However, with reference to the various homesteads, it is a cultural practice that premature babies or infants that died very young are sometime buried within the homestead, either in the courtyard or even within the house.			
<b>Recommendation:</b>			
It is recommended that these sites are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most edge of the visible structures for the duration of the construction of the power lines. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.			
<b>Requirements</b>			
A permit should be obtained from SAHRA for the possible impact on these sites prior to the development taking place.			



Fig. 12. The identified isolated structures.

Location	No. 1 (Centre point)	S 28.24691	E 29.08784
	No. 2 (Centre point)	S 28.25071	E 29.08750
	No. 3 (Centre point)	S 28.25408	E 29.08186
	No. 4 (Centre point)	S 28.26070	E 29.07692
	No. 5 (Centre point)	S 28.26486	E 29.06936
	No. 6 (Centre point)	S 28.24804	E 29.08938
Description			
<p>A number of informal burial places were identified. These range in size from single graves to cemeteries containing as many as 30 graves. In most cases the graves are only marked with stone cairns and have no headstones with any information on it. Interviews with local inhabitants indicate that in most cases the graves all date to the recent past, i.e. are less than 50 years old but older than 20 years.</p>			
<p>Some features (No. 6) have been identified, but it is uncertain what their origin and function might be. It seems to be graves, but as they are located in the middle of what was</p>			

<p>an agricultural field, it might be field clearing cairns. It is proposed to err on the side of caution and they are included here.</p>	
<b>Significance</b>	High on a local level – Grade III
<b>Mitigation</b>	
<p>All of the burial sites are located inside the identified corridors. In some cases (see Fig. 9) the proposed power line would cross over the burial site or in close proximity to it.</p>	
<b>Recommendation:</b>	
<p>It is recommended that these burials are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most graves for the duration of the construction of the power lines.</p> <p>If any of these burial sites cannot be avoided, it is recommended that graves are relocated after the proper procedure has been followed – see Appendix 3.</p>	
<b>Requirements</b>	
<p>See Appendix 3 for a summary of the procedure to follow if some of the graves have to be relocated.</p>	

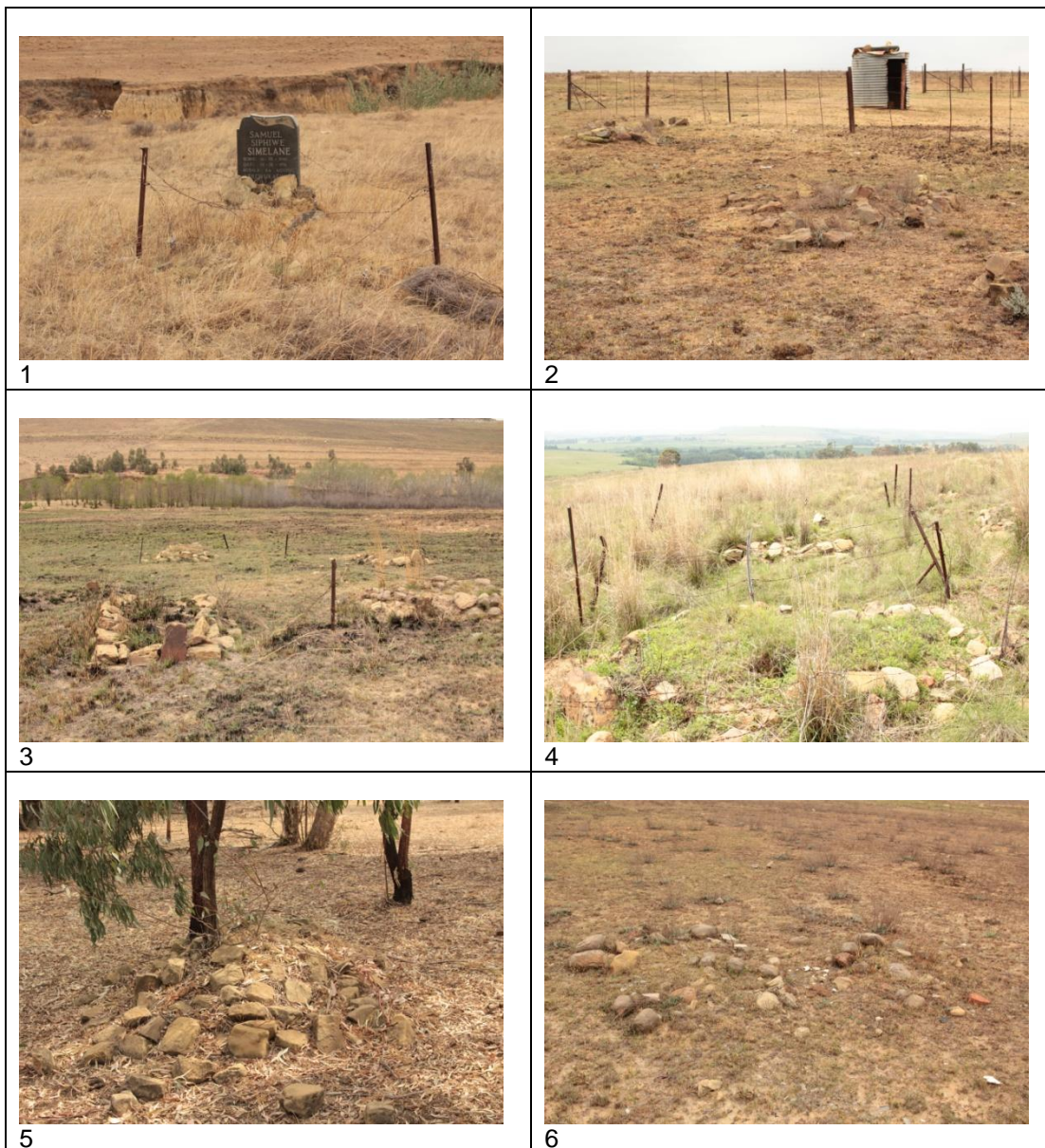


Fig. 13. The identified burial places.

## 6. SITE SIGNIFICANCE AND ASSESSMENT

### 6.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation, on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the application of mitigation measures would allow the development activities to continue.

### 6.2 Statement of significance

In terms of Section 7 of the NHRA, all the sites currently known or which are expected to occur in the study area are evaluated to have Grade III significance.

- A number of stone walled settlement sites dating to the Late Iron Age have been identified on a ridge near the middle of the power line routes. They can be associated with the Sotho-speakers and date from the period AD 1600 onwards. As little is known about Late Iron Age settlement in this region and the sites are still well-preserved, they are viewed to have the following significance:
  - High on a regional level – Grade III
- Various features dating to the historic period have been identified in the larger study area. These vary from farming related structures (old stock pens, etc.) to homesteads formerly occupied by farm labourers. These sites would not differ from similar sites in contiguous areas or from the larger region and are therefore viewed to have the following significance:
  - Low on a local level – Grade III
- A number of informal burial places were identified. These range in size from single graves to cemeteries containing as many as 30 graves. In most cases the graves are only marked with stone cairns and have no headstones with any information on it. Burial sites are usually significant to descendants of people buried there, unless the site can be linked to a historic significant individual or group of individuals, or a specific event. As this is not the case here, they are viewed to have to following significance:
  - High on a local level – Grade III

### 6.3 Impact assessment

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development:

- A number of stone walled settlement sites dating to the Late Iron Age have been identified on a ridge near the middle of the power line routes. The one corridor cover these sites and the proposed power line might cross over some of the identified

structures. In addition, as the sites are located close to the edge of the ridge, it is possible that a tower might be located in or in close proximity of some of the stone walled sites.

- As very little is known about Late Iron Age sites in this region, it is recommended that the sites are retained and that it is fenced off with danger tape during construction. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- Various features dating to the historic period have been identified in the larger study area. These vary from farming related structures (old stock pens, etc.) to homesteads formerly occupied by farm labourers.
  - It is recommended that these sites are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most edge of the visible structures for the duration of the construction of the power lines. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- A number of informal burial places were identified. All of the burial sites are located inside the identified corridors. In some cases the proposed power line would cross over the burial site or in close proximity to it.
  - It is recommended that these burials are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most graves for the duration of the construction of the power lines. If any of these burial sites cannot be avoided, it is recommended that graves are relocated after the proper procedure has been followed – see Appendix 3.

## 7. RECOMMENDATIONS

The aim of this survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area of the proposed development, to assess the significance thereof and to consider alternatives and plan for the mitigation of any adverse impacts.

The cultural landscape qualities of the region surrounding the study area consists two components. The first is an extensive Stone Age occupation, which in most cases clustered in the vicinity of the various water sources as well as preferred habitable areas such as hills and outcrops. This period, spanning many thousands of years, was followed by a much shorter farming and urban occupation.

- A number of stone walled settlement sites dating to the Late Iron Age have been identified on a ridge near the middle of the power line routes. They can be associated with the Sotho-speakers and date from the period AD 1600 onwards. As little is known about Late Iron Age settlement in this region and the sites are still well-preserved, they are viewed to have the following significance:
  - High on a regional level – Grade III



- As very little is known about Late Iron Age sites in this region, it is recommended that the sites are retained and that it is fenced off with danger tape during construction. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- Various features dating to the historic period have been identified in the larger study area. These vary from farming related structures (old stock pens, etc.) to homesteads formerly occupied by farm labourers. These sites would not differ from similar sites in contiguous areas or from the larger region and are therefore viewed to have the following significance:
  - Low on a local level – Grade III
  - It is recommended that these sites are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most edge of the visible structures for the duration of the construction of the power lines. If it is impossible to avoid these sites, either by placing a tower on them or by the power line crossing it, the sites that are to be impacted on should be documented and excavated by a qualified archaeologist. It is also recommended that an archaeologist is present when construction is taking place on the site in order to monitor any material that might be exposed during the construction activities.
- A number of informal burial places were identified. These range in size from single graves to cemeteries containing as many as 30 graves. In most cases the graves are only marked with stone cairns and have no headstones with any information on it. Burial sites are usually significant to descendants of people buried there, unless the site can be linked to a historic significant individual or group of individuals, or a specific event. As this is not the case here, they are viewed to have to following significance:
  - High on a local level – Grade III
  - It is recommended that these burials are left in place and that they are fenced off with danger tape with a buffer of at least 10 metres from the outer most graves for the duration of the construction of the power lines. If any of these burial sites cannot be avoided, it is recommended that graves are relocated after the proper procedure has been followed – see Appendix 3.

Therefore, from a heritage point of view we recommend that the proposed development can continue on condition of acceptance of the recommended mitigation measures. We also recommend that if archaeological sites or graves are exposed during development activities, it should immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

## 8. REFERENCES

### 8.1 Data bases

Chief Surveyor General  
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.  
Heritage Atlas Database, Pretoria.  
National Archives of South Africa

### 8.2 Literature

Acocks, J.P.H. 1975. *Veld Types of South Africa*. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

Bergh, J.S. (Red). 1999. *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies*. Pretoria: JL van Schaik.

Maggs, T.M.O'C. 1976. *Iron Age communities of the southern Highveld*. Pietermaritzburg: Natal Museum.

Mason, R.J. 1968. Transvaal and Natal Iron Age settlement revealed by aerial photography and excavation. *African Studies* 27.

Mason, R.J. 1969. *Prehistory of the Transvaal*. Johannesburg: University of the Witwatersrand Press.

Oberholster, J.J. 1972. *The historical monuments of South Africa*. Cape Town: Rembrand van Rijn Foundation.

Raper, P.E. 2004. *South African place names*. Johannesburg: Jonathan Ball Publishers.

Richardson, D. 2001. *Historic sites of South Africa*. Cape Town: Struik Publishers.

### 8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2829AA, 2829AC  
Google Earth

## APPENDIX 1: CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON HERITAGE RESOURCES

### Significance

According to the NHRA, Section 2(vi) the **significance** of a heritage sites and artefacts is determined by it aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

<b>1. Historic value</b>				
Is it important in the community, or pattern of history				
Does it have strong or special association with the life or work of a person, group or organisation of importance in history				
Does it have significance relating to the history of slavery				
<b>2. Aesthetic value</b>				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
<b>3. Scientific value</b>				
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage				
Is it important in demonstrating a high degree of creative or technical achievement at a particular period				
<b>4. Social value</b>				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
<b>5. Rarity</b>				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
<b>6. Representivity</b>				
Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects				
Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class				
Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.				
<b>7. Sphere of Significance</b>		High	Medium	Low
International				
National				
Provincial				
Regional				
Local				
Specific community				
<b>8. Significance rating of feature</b>				
1.	Low			
2.	Medium			
3.	High			

**Significance of impact:**

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a “no-go” implication on the project regardless of any mitigation

**Certainty of prediction:**

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

**Recommended management action:**

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation/action necessary
- 2 = controlled sampling and/or mapping of the site necessary
- 3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
- 4 = preserve site at all costs

**Legal requirements:**

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.

## APPENDIX 2. RELEVANT LEGISLATION

All archaeological and palaeontological sites, and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

The National Heritage Resources Act (Act no 25 of 1999) stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation, and which prescribes heritage resources assessment criteria, consistent with the criteria set out in section 3(3), which must be used by a heritage resources authority or a local authority to assess the intrinsic, comparative and contextual significance of a heritage resource and the relative benefits and costs of its protection, so that the appropriate level of grading of the resource and the consequent responsibility for its management may be allocated in terms of section 8.

Presenting archaeological sites as part of tourism attraction requires, in terms 44 of the Act, a Conservation Management Plan as well as a permit from SAHRA.

(1) Heritage resources authorities and local authorities must, wherever appropriate, co-ordinate and promote the presentation and use of places of cultural significance and heritage resources which form part of the national estate and for which they are responsible in terms of section 5 for public enjoyment, education, research and tourism, including-

- (a) the erection of explanatory plaques and interpretive facilities, including interpretive centres and visitor facilities;
- (b) the training and provision of guides;
- (c) the mounting of exhibitions;
- (d) the erection of memorials; and
- (e) any other means necessary for the effective presentation of the national estate.

(2) Where a heritage resource which is formally protected in terms of Part I of this Chapter is to be presented, the person wishing to undertake such presentation must, at least 60 days prior to the institution of interpretive measures or manufacture of associated material, consult with the heritage resources authority which is responsible for the protection of such heritage resource regarding the contents of interpretive material or programmes.

(3) A person may only erect a plaque or other permanent display or structure associated with such presentation in the vicinity of a place protected in terms of this Act in consultation with the heritage resources authority responsible for the protection of the place.

### APPENDIX 3: RELOCATION OF GRAVES

What follows below is a somewhat generic approach on the steps and procedures to follow if graves are to be relocated:

- If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits and have their own requirements that must be adhered to.
- If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by law.
- SAHRA allows only archaeologists with an accreditation as Principal Investigator for the Relocation of Graves, to oversee such a process.

Once it has been decided to relocate particular graves, the following steps should be taken:

- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker. All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit. The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention to relocate the graves needs to be placed in at least two local newspapers and have the same information as the above point. This is a requirement by law.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account. This is a requirement by law.
- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave.

#### Information needed for the SAHRA permit application

- The permit application needs to be done by an archaeologist.
- A map of the area where the graves have been located.
- A survey report of the area prepared by an archaeologist.
- All the information on the families that have identified graves.
- If graves have not been identified and there are no headstones to indicate the grave, these are then unknown graves and should be handled as if they are older than 60 years. This information also needs to be given to SAHRA.

- A letter from the landowner giving permission to the developer to exhume and relocate the graves.
- A letter from the new cemetery confirming that the graves will be reburied there.
- Details of the farm name and number, magisterial district, and GPS coordinates of the gravesite.